O. HÄKONSEN.

FOGHORN FOR MOTOR CRAFTS.

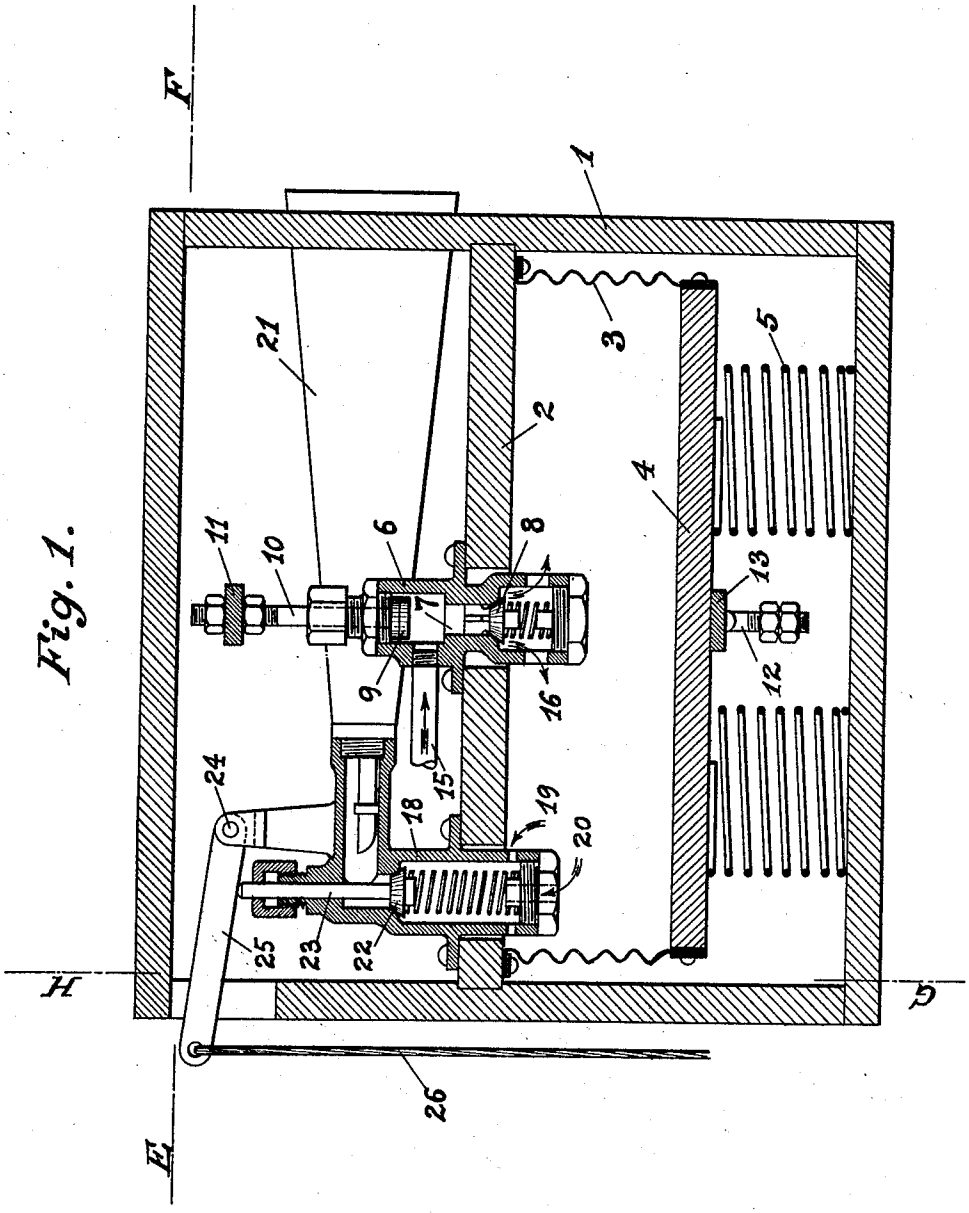
APPLICATION FILED AUG. 27, 1921.

1,428,587.

Patented Sept. 12, 1922.

2 SHEETS—SHEET 1.

Fig. 1.



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INVENTOR

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Fig. 3.

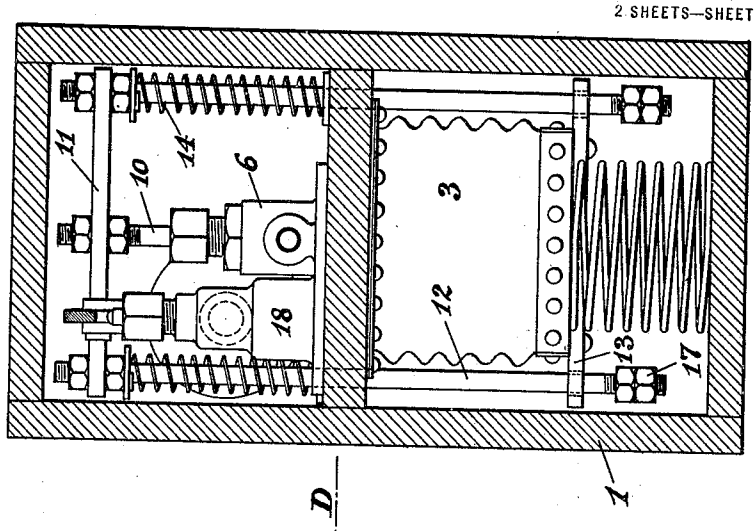
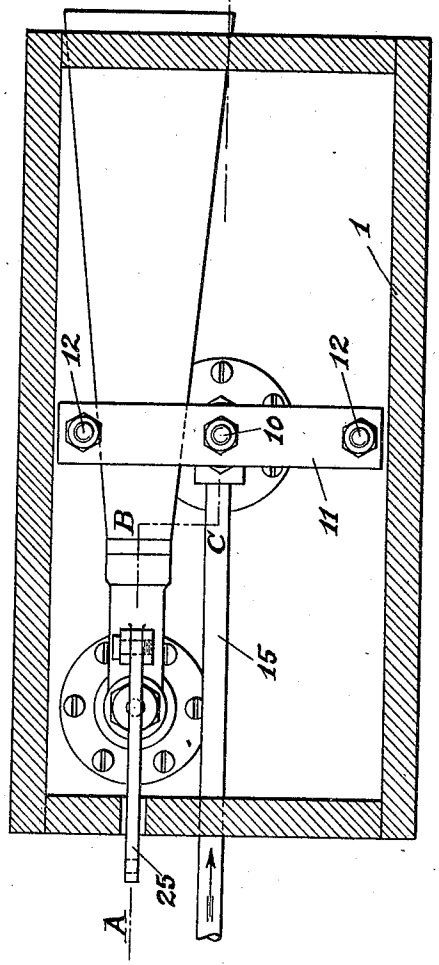


Fig. 2.



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UNITED STATES PATENT OFFICE.

OLE HÅKONSEN, OF SKUDENES, NORWAY.

FOGHORN FOR MOTOR CRAFTS.

Application filed August 27, 1921. Serial No. 495,900.

To all whom it may concern:

Be it known that I, OLE HÅKONSEN, a subject of the King of Norway, residing at Skudenes, Norway, have invented a new and useful Foghorn for Motor Crafts, of which the following is a specification.

This invention relates to a fog-horn for motor crafts. The essentially new feature consists in that the compressed air required for the action of the horn, is taken from the crank chamber of the motor. With the two cycle motors, generally used in motor crafts, the crank chamber, it is well known, is incased and acts as an air compressor for the motor.

A construction of the invention is illustrated in the accompanying drawings in which:—

Fig. 1 is a vertical section along the line A—B—C—D in Fig. 2.

Fig. 2 is a horizontal section along the line E—F in Fig. 1.

Fig. 3 is a vertical cross section along the line G—H in Fig. 1.

The whole apparatus is mounted in a box 1 which is divided by a horizontal board 2 into two compartments. The board 2 forms the upper side of a bellows 3, the bottom 4 of which is pressed upwards by two spiral springs 5.

In a hole in the board there is placed a valve-casing 6, the vertical bore 7 of which is at its under end closed by a valve 8, that is pressed upwards by a spiral spring. Above the bore 7 there is placed another valve 9, which is by a stem 10 and a traverse 11 connected with two vertically movable rods 12. These rods are placed one on each side of the bellows and are slidable in a traverse 13 attached to the under side of the bellows. The rods are guided in holes in the board 2 and are together with the valve 9 pressed upwards by spiral springs 14.

The valve-casing 6 is connected with the crank chamber of the motor by a pipe 15, and the compressed air enters the bellows through the valve 8 and the holes 16 in the valve casing 6. On filling the bellows with compressed air, its bottom and with it the traverse 13 is pressed downwards. When the bellows has been nearly filled, the traverse pushes against the nuts 17 on the rods 12. Hereby the rods and with them also the valve 9 are moved downwards. At last the valve shuts in this way the bore 7, and the entrance of compressed air thereby ceases automatically.

On the board 2 there is also placed another valve-casing 18, which is in connection with the bellows by the air-holes 19 and 20, while it is on the other side connected with the horn 21. In the valve-casing there is a valve 22 which is pressed upwards by a spiral spring and usually shuts off the flow of air to the horn. The valve is connected with a stem 23 and can be moved downwards by a lever 25, pivoted at 24 and at its free end connected with a cord 26.

By pulling the cord 26 the valve 22 is opened, whereby the bellows will, by the action of the springs 5, blow air through the horn which is in this way brought into action.

As the bellows is now being pressed together, the springs 14 will lift the rods 12 and therewith the valve 9; hereby there is let automatically new air into the bellows, until the latter has been refilled.

The construction of the apparatus may be varied in many ways without departing from the principle of the invention. For example the valve-casings need not be placed directly on the bellows, but can be connected with the latter by pipings. Instead of springs 5 for compressing the bellows other devices may be used, for instance, weights. Instead of a bellows any other pressure accumulator may also be used.

What I claim and desire to secure by Letters Patent of the United States is:—

1. A signaling device comprising an air reservoir being connected to a source of compressed air, means interposed between said source and said reservoir to control the passage of air to the latter, a horn connected to said reservoir and adapted to be operated by compressed air, means interposed between the reservoir and said horn for controlling the passage of air from said reservoir to said horn, and means cooperating with said reservoir to reduce its capacity, whereby uniform air pressure may be maintained in the reservoir as the air volume decreases.

2. A signaling device comprising an air reservoir being connected to a source of compressed air, means interposed between said source and said reservoir to control the passage of air to the latter, a horn connected to said reservoir and adapted to be operated

by compressed air, means normally preventing passage of air from said reservoir to said horn, said means being operable to permit passage of air from said reservoir to said horn, and means cooperating with said reservoir to reduce its capacity, whereby uniform air pressure may be maintained in the reservoir as the air volume decreases.

3. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air which normally holds it expanded, means interposed between said source and said reservoir to control the passage of air to the latter, a horn connected to said reservoir and adapted to be operated by compressed air, a valve interposed between said reservoir and said horn and normally closed to prevent passage of air from said reservoir to said horn, means for opening said valve to permit passage of air from said reservoir to said horn, and means whereby the reservoir is collapsed to discharge the air contained therein through the horn when said valve is opened.

4. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air, means for controlling the passage of air from said source to said reservoir, means for operating said last-named means to shut off said passage of air when the reservoir is full, a horn connected to said reservoir and adapted to be operated by compressed air, means interposed between said reservoir and said horn for controlling the passage of air from said reservoir to said horn but normally preventing said passage of air, means whereby the operation of said last-named means to allow said passage of air from the reservoir to the horn causes said reservoir to collapse to discharge the air through said horn, and means effective upon the collapse of said reservoir to operate said first-named means to open said passage from the source of air supply to said reservoir to refill the reservoir.

5. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air, a valve for controlling the passage of air from said source to said reservoir, means for closing said valve when the reservoir is full, a horn connected to said reservoir and adapted to be operated by compressed air, a second valve, normally closed, interposed between said reservoir and said horn, means for causing said reservoir to collapse to discharge the air contained therein through said horn when said second valve is opened, and means effective upon the collapse of said reservoir to open said first valve and permit the supply of air from said source to refill said reservoir.

6. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air, a valve for controlling the passage of air from said source to said reservoir, said valve having a valve-stem, a connection between said reservoir and said stem whereby the valve is closed when the reservoir is full, a horn connected to said reservoir and adapted to be operated by compressed air, a second valve, normally closed, interposed between said reservoir and said horn, means for causing said reservoir to collapse to discharge the air contained therein through said horn when said second valve is opened, means effective upon the collapse of said reservoir to operate said valve stem to open said first valve and permit the supply of air from said source to refill said reservoir.

7. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air, a valve for controlling the passage of air from said source to said reservoir, said valve having a valve stem, a connection between said reservoir and said stem whereby the valve is closed when the reservoir is full, a horn connected to said reservoir and adapted to be operated by compressed air, a second valve, normally closed, interposed between said reservoir and said horn, springs for causing said reservoir to collapse to discharge the air contained therein through said horn when said second valve is opened, means effective upon the collapse of said reservoir to operate said valve stem to open said first valve and permit the supply of air from said source to refill said reservoir.

8. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air, a valve for controlling the passage of air from said source to said reservoir, said valve having a valve stem, means normally holding said stem in position to maintain said valve open to permit passage of air to said reservoir, a connection between said reservoir and said stem whereby said reservoir when full actuates said stem against the action of said means to close said valve, a horn connected to said reservoir and adapted to be operated by compressed air, a second valve, normally closed, interposed between said reservoir and said horn, and means for causing said reservoir to collapse to discharge the air contained therein through said horn when said second valve is opened, the collapse of said reservoir permitting said first-named means to open said first valve and permit the supply of air from said source to refill said reservoir.

9. A signaling device comprising a flexible air reservoir, said reservoir being connected to a source of compressed air, a valve for controlling the passage of air from said source to said reservoir, said valve hav-

ing a valve stem, spring means normally holding said stem in position to maintain said valve open to permit passage of air to said reservoir, a connection between said reservoir and said stem whereby said reservoir when full actuates said stem against the action of said spring means to close said valve, a horn connected to said reservoir and adapted to be actuated by compressed air, a second valve, normally closed, interposed between said reservoir and said horn, and spring means for causing said reservoir to collapse to discharge the air contained therein through said horn when said second valve is opened, the collapse of said reservoir permitting said first-named spring means to open said first valve and permit the supply of air from said source to refill said reservoir.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

OLE HÅKONSEN.

Witnesses:
JONAS MELING,
P. ARAFJORD.